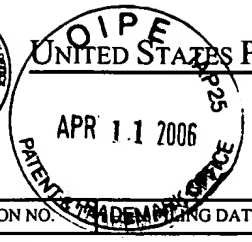
3629
IAU



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/847,828	05/02/2001	Russell F. McKnight	2098	6296

7590 03/21/2006

Suiter & Associates, P.C.
Suite 205
11516 Nicholas Street
Omaha, NE 68154-4409

EXAMINER	
RUHL, DENNIS WILLIAM	
ART UNIT	**PAPER NUMBER**
3629	

DATE MAILED: 03/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/847,828	MCKNIGHT ET AL.	
	Examiner	Art Unit	
	Dennis Ruhl	3629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-33 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-33 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

With respect to the IDS that is citing US patent 6081813, this patent number has apparently been withdrawn and the examiner cannot view the disclosure. This document is not in the USPTO patent database and the examiner does not have a copy to review. This reference has not been considered and has been crossed out on the 1449 statement for this reason.

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 12-29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

For claims 12,30, the preamble states "via a network", but the examiner notes that in the body of the claim there is no network recited. It is not clear if the computing resources are being provided via a network as the preamble indicates. The examiner is not clear as to whether or not there is a network being used in this method claim because the body of the claim lacks any mention of a network. There is also no antecedent basis for "the negotiated agreement". Is this the same as the agreement from line 3 or another agreement that was not previously claimed? No negotiated agreement has previously been recited.

For claim 15, there is no antecedent basis for "wherein the step of negotiating an agreement with a customer". It was not claimed that an agreement was negotiated so

what step does this refer to? It has only been claimed that an agreement was entered into, which does not require negotiation. This step lacks antecedent basis.

For claims 22-29, it is not clear to the examiner as to what statutory class of invention the claims are directed to. Are the claims directed to a method or a system? Claim 22 recites two structural elements but has 4 recitations to method steps so even though the preamble indicates a "system", the examiner is not clear as to what statutory class these claims are reciting. The language "a plurality of information handling systems furnishing computing resources..." is a recitation to structure and is also reciting that the information handling systems are doing something (furnishing). This is a method of use limitation. Are claims 22-29 article or method claims? The dependent claims add further confusion to this issue because they also recite method steps directed to steps of use.

3. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 22-29 are rejected under 35 U.S.C. 101 because the claimed invention is written in a manner that seems to be a mix of statutory classes (apparatus and method). The claims are directed to more than one statutory class of invention, which is improper.

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 22-29 are rejected under 35 U.S.C. 102(e) as being anticipated by Kraft et al. (6112225).

The examiner has examined claims 22-29 as if they are apparatus claims. Kraft discloses a system manager 102 and a plurality of information handling systems 106. The computers 106 are disclosed as providing distributed computing services. The language directed to how the computing resources have been acquired has been considered but it not reciting any further structure to the system. The manner by which the computer resources are acquired does not result in any structure that is not found in Kraft. The limitations recited in claims 23-29 are directed to method steps and do not result in any structure being claimed that is not found in Kraft.

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 1-4,6-9,11-19,21,30,31,33, are rejected under 35 U.S.C. 103(a) as being unpatentable over Kraft et al. (6112225).

For claim 1,6,7,11,12,15,21,30,33, Kraft discloses a method of providing distributed computing services as claimed. Kraft discloses that complex tasks can be broken up into smaller tasks and these smaller tasks are sent to customer's PC's via the Internet for processing. Kraft discloses the act of providing a reward to the owner of the PC for their participation in the distributed computing network. Not disclosed is the step of receiving an order for an information handling system as claimed. Also not disclosed is the step of leasing the computing resources from the customer. With respect to the receiving of an order for an information handling system, because the customers in Kraft have PC's that participate in the distributed computing the computers must have been obtained in some manner. One well-known manner of obtaining a computer is to purchase one. It would have been obvious to one of ordinary skill in the art at the time

the invention was made for the customer to purchase their PC from a computer retailer (the retailer receives an order from the customer) because this is the old and notoriously well known manner of obtaining a computer. This is easier than making a computer, which not many people are capable of doing. With respect to the step of leasing the computing resources, Kraft discloses that customers are rewarded for their participation in the distributed computing network. Column 9, line 62-column 10, line 4 discloses that rewards are given to owners of computers that participate in the distributed computing. This can be in the form of money. The situation disclosed in Kraft is essentially an agreement that the owner will make their PC available for distributed computing tasks, and the owner will receive compensation for making the computer resource available. It would have been obvious to one of ordinary skill in the art at the time the invention was made to lease the computing resources from the PC owner, so that the agreement was more formalized and both parties knew what they would receive from the other.

For claims 2,3,7,8,12,13,31, applicant has claimed the configuring of the information handling system for providing the computing resources. The examiner interprets this to be the act of providing the owner's PC with a processor, database, and a modem. These features allow distributed computing to occur. This is clearly done prior to delivery to the owner as claimed.

For claims 4,9,14, see column 9, line 62-column 10, line 4 where the claimed incentive is disclosed.

For claims 16,17, not disclosed is the step of determining whether or not the customer is in compliance with the agreement, and if they are not in compliance,

discontinuing the incentive. The examiner feels that one of ordinary skill in the art would find this obvious based on the level of ordinary skill in the art. Clearly, if you are providing compensation to the PC owner for using their PC for distributed computing, if they do not allow you to access their PC for the purpose of performing distributed computing, one of ordinary skill in the art would find it obvious to not provide the incentive. One of ordinary skill in the art would find it obvious to monitor compliance with the agreement and would discontinue the incentive if the owner was not honoring their portion of the agreement.

For claims 18,19, Kraft does not disclose what is claimed. It is old and well known that agreements, such as leases, have times periods associated with the term of the lease. If an expiration date were included in the lease, it would have been obvious to one of ordinary skill in the art at the time the invention was made to determine if the customer would like to continue with the distributed computing lease once the previous lease is expired. This is just the act of renewing a lease, which is nothing new and is old and well known in the art. Because an incentive was provided for the lease, it follows that a second incentive would be provided with the new lease. One of ordinary skill in the art would not expect a PC owner to enter into a lease unless they are getting something out of the deal (incentive).

9. Claims 5,10,20,32, are rejected under 35 U.S.C. 103(a) as being unpatentable over Kraft et al. (6112225) in view of Leighton et al. (6108703).

For claims 5,10,20,32, Kraft does not disclose that the distributed computing services are hosting content on the World Wide Web. Leighton discloses a method where a content provider for the Internet can distribute and replicate content data to many computer servers instead of having all the content stored on one server. This allows for faster retrieval of information and duplication of data in the event the main server is lost. The method of Leighton is a form of distributed computing in that many computers are employed instead of a large computer server. This allows large amounts of data to be efficiently stored and retrieved as discussed by Leighton. It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide Kraft with the ability to assist Internet content providers by allowing them to store content on individual owner's PC's as taught by Leighton and in return the PC owners would receive compensation, just like when their PC is used to number crunching. This would be another product/service that Kraft could provide and would be satisfied by utilizing the individual owner's PC systems.

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. "Companies create way to put idle PCs to work through Net", "Magnosoft Awarded to US patents, leading provider of Internet software and services recognized for Distributed Computing Innovations", "The secret life of the home computer", "Move in on to put idle computers to work", "DataSynapse announces

premium benefits package for broadband users who join the company's Distributed Computing Network", "PCs put to work byte by byte Power, A group of Internet entrepreneurs envisions harnessing the unused capacity of millions of home computers to solve important problems" "Are you ready for cooperative processing?", and Bonnell (5655081) are references that discuss distributed computing and the advantages it provides.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dennis Ruhl whose telephone number is 571-272-6808. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Weiss can be reached on 571-272-6812. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DENNIS RUHL
PRIMARY EXAMINER

Please type a plus sign (+) inside this box → [+]

PTO/SB/08A (10-96)
Approved for use through 10/31/99. OMB 0651-0031
Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO

SUPPLEMENTAL

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 1 of 1

Complet if Known	
Application Number	09/847,828
Filing Date	5/2/2001
First Named Inventor	McKnight et al
Group Art Unit	
Examiner Name	
Attorney Docket Number	P1710US00

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	U.S. Patent Document Number	Kind Code[2] (if known)	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
DR		5,771,354		Crawford	06/23/1998	

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Foreign Patent Document Office[3]	Number[4]	Kind Code[5] (if known)	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T[6]
DR			WO 00/77636		WALDO ET AL	12/21/2000		
DR			WO 00/43937		KENYON ET AL	07/27/2000		
DR			WO 01/25916		FREENY	04/12/2001		
DR			EP 0809202		NIELSEN	11/26/1997		

Examiner Signature		Date Considered	2-27-06

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] Unique citation designation number. [2] See attached Kinds of U.S. Patent Documents. [3] Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [4] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [5] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. [6] Applicant is to place a check mark here if English language Translation is attached.

In Place of FORM PTO-1449 (Modified)

LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT

Serial No.:
Applicant: Russell F. McKnight, et al.
Filing Date: May 2, 2001
Group:
Atty. Docket No.: 2098

Reference Designation

U.S. PATENT DOCUMENTS

Examiner Initial	Document Number	Date	Name	Class	Subclass	Filing Date if Appropriate
DK AAA	6,167,428	12/26/00	Ellis	709	201	05/27/99
DK ABA	6,108,703	08/22/00	Leighton et al.	709	226	05/19/99
DK ACA	6,112,225	08/29/00	Kraft et al.	709	202	03/30/98
___ ADA	~~6,081,813~~	~~06/27/00~~	~~Wollrath et al.~~	~~707~~	~~206~~	~~09/11/98~~
DK AEA	6,069,310	05/30/00	James	84	645	03/11/98
DK AFA	6,047,258	04/04/00	Allison et al.	705	1	08/11/97
DK AGA	5,889,951	03/30/99	Lombardi	395	200.49	05/13/96
DK AHA	5,819,092	10/06/98	Ferguson et al.	395	701	10/06/97
___ AIA						
___ AJA						

W/D

FOREIGN PATENT DOCUMENTS

Examiner Initial	Document Number	Date	Country	Class	Subclass	Translation Yes	Translation No
___ AKA							
___ ALA							
___ AMA							
___ ANA							
___ AOA							

OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

Examiner Initial

DK APA "SETI and Distributed Computing" by Garrett Moritz; http://www.gtexts.com/college/papers/s7.html; January 23, 2001, 3:27 p.m.

DK AQA "Trusting the Net" by Clinton Wilder and Mary E. Thyfault; Informationweek, n601, 96/10/14, ~~pp 14-15~~; 1 page only wysiwyg://9/http://access.nerac.com/WND...016CC2F&STITEM=0001&APP=XXX&SCROLL=NEXT.

DK ARA "Juno to harvest wasted PC power" by The Associated Press, February 1, 2001, 10:10 p.m. PT; http://news.cnet.com/news/0-1005-200-4689725.html?tag=.

Examiner: [signature] Date Considered: 2-27-06

EXAMINER: Initial if reference considered, whether nor not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Notice of References Cited	Application/Control No. 09/847,828	Applicant(s)/Patent Under Reexamination MCKNIGHT ET AL.	
	Examiner Dennis Ruhl	Art Unit 3629	Page 1 of 2

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-5,655,081	08-1997	Bonnell et al.	709/202
	B	US-			
	C	US-			
	D	US-			
	E	US-			
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	"Companies create way to put idle PCs to work through Net", 11/2000, 6 pages
	V	"Magnosoft Awarded to US patents, leading provider of Internet software and services recognized for Distributed Computing Innovations", 12/2000, 3 pages
	W	"The secret life of the home computer", 6/2000, 6 pages
	X	Move is on to put idle computers to work", 11/2000, 4 pages

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Notice of References Cited	Application/Control No. 09/847,828	Applicant(s)/Patent Under Reexamination MCKNIGHT ET AL.	
	Examiner Dennis Ruhl	Art Unit 3629	Page 2 of 2

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
	A	US-			
	B	US-			
	C	US-			
	D	US-			
	E	US-			
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	"DataSynapse announces premium benefits package for broadband users who join the company's distrituted computing network", 11/2000, 4 pages
	V	PCs put to work, byte by byte power: A group of Internet entrepreneurs envisions harnessing the unused capacity of millions of home computers to solve important problems", 10/2000, 5 pages
	W	"Are you ready for cooperative processing?", 4/1990, 2 pages
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

USA TODAY.com

Companies create way to put idle PCs to work through Net; [FINAL Edition]

Michelle Kessler. USA TODAY. McLean, Va.: Nov 17, 2000. pg. 08.B

Subjects:	Computer networks
Author(s):	Michelle Kessler
Document types:	News
Section:	*MONEY*
Publication title:	USA TODAY. McLean, Va.: Nov 17, 2000. pg. 08.B
Source type:	Newspaper
ISSN/ISBN:	07347456
ProQuest document ID:	63997412
Text Word Count	1087
Document URL:	http://proquest.umi.com/pqdweb?did=63997412&sid=2&Fmt=3&clientId=19649&RQT=309&VName=PQD

Abstract (Document Summary)

DataSynapse, Entropia, Parabon, Popular Power and United Devices are small, young companies that have created a service to do just that -- on an even larger scale. They see the Internet as a huge network of underused PCs that really ought to be working while their owners are away. By chopping work into little pieces and farming it out to thousands of PCs, they say, corporations wouldn't have to spend millions of dollars on expensive computers every time they need more processing muscle.

* The PC processes the task. It does not need to be online to do this. Some **distributed-computing** programs wait for users to be idle for several minutes before they start to run. Others use every moment, including the nanoseconds between users' keystrokes. The programs stop when the PC user resumes use

of the PC.

* PC owners. The amount of computing power available through the Web is immense. More than 53 million U.S. households are expected to be online this year, according to Jupiter Research. But they must be convinced that the service is safe. Experts say most **distributed- computing** software won't make PCs run slowly, wear them out or snoop into files.

Full Text (1087 words)

Your personal computer is lazy.

Your trusty desktop PC doesn't need to eat, sleep or catch up on office gossip. Yet it sits idle while you do those things.

Imagine if you could harness that unused computing power to solve a problem. Combine it with the leftover muscle of the PC in the next cubicle, and you've got even more power. Think of what you could do with the whole office.

DataSynapse, Entropia, Parabon, Popular Power and United Devices are small, young companies that have created a service to do just that -- on an even larger scale. They see the Internet as a huge network of underused PCs that really ought to be working while their owners are away. By chopping work into little pieces and farming it out to thousands of PCs, they say, corporations wouldn't have to spend millions of dollars on expensive computers every time they need more processing muscle.

It's called distributed computing, and it's like having a piece of a supercomputer on every desk.

"We were amazed at how much idle capacity is available in the real world," says Parabon CEO Steven Armentrout, who estimates that 75% to 80% of most computers' processing power is wasted.

How it works:

* PC owners download software from the Web site of Parabon or other distributed-computing firm.

* The next time the PC is idle for several minutes and connected to the Internet, the software "calls home" to the company's computers and retrieves its task. This works best over fast, always-on Internet connections, but it can also work over dial-up connections.

* The PC processes the task. It does not need to be online to do this. Some distributed-computing programs wait for users to be idle for several minutes before they start to run. Others use every moment, including the nanoseconds between users' keystrokes. The programs stop when the PC user resumes use of the PC.

* Once the task is done, the PC sends it back and grabs a new one.

Distributed computing works best for problems that are easily divided into small parts. It can help a biotechnology researcher model viruses to understand

how they work, for instance.

It's attractive because it's cheap and flexible.

Parabon plans to charge customers less than $100 to use 1,000 average PCs for an hour. That's enough computing power to spell check the ⓘEncyclopaedia Britannica about 360 times.

The technology behind distributed computing is not new. Scientists have linked supercomputers this way for years. Companies have distributed-computing software on internal networks to get extra work done at night and on weekends.

Since April 1999, PC users have even donated processing time over the Internet to search for aliens through a University of California at Berkeley project.

But this is the first time that the Internet is being seen as a source of untapped computing power for Corporate America -- and a moneymaking opportunity for the companies that make it happen. It won't be easy. The firms need to woo two groups:

* Companies. No matter how much a company needs processing power, it probably won't sign up until the people in charge believe distributed-computing services are secure and reliable. Distributed- computing companies insist that their encryption methods are as secure as those used by online banks and brokers.

Companies also worry that their data will be lost through computer crashes or bad Internet connections. "We are really good at building reliable systems out of unreliable networks," says Marc Hedlund, CEO of Popular Power.

Exodus Communications, a Web hosting and services firm, will use United Devices' software to test the capacity of their clients' Web sites. "The Internet now is my test lab," says J.D. Brisk of Exodus Performance Labs. "It's a newfound pool of resources . . . only limited by our imagination."

Other distributed-computing companies are currently testing their software by donating their services to researchers fighting diseases such as cancer and influenza.

* PC owners. The amount of computing power available through the Web is immense. More than 53 million U.S. households are expected to be online this year, according to Jupiter Research. But they must be convinced that the service is safe. Experts say most distributed- computing software won't make PCs run slowly, wear them out or snoop into files.

But, in most cases, people will not know what kind of work is being done on their PC.

"There's a little bit of a scary side," says Pete Beckman, director of the research division of ⓘTurboLinux, which sells distributed-computing software. "New technology is extremely powerful and alluring . . . but it could be a million people all computing and doing something for the wrong purpose."

Ed Hubbard, CEO of ⓘUnited Devices, says his company relies on an "implicit trust" with its members. "We're not going to go off and design nuclear weapons," he says. United Devices monitors the work being processed.

DataSynapse, Popular Power and Parabon plan to woo members the old fashioned way -- with money. They expect to pay members $5 to $15 per month,

depending on the amount of work their PCs complete. United Devices' members are enrolled in a sweepstakes for travel vouchers, goods or cash.

Entropia hopes to persuade people to pledge extra computing time to charitable causes such as AIDS research. Eventually, Entropia wants some of the computing time to go to business interests.

Sean McCann and his wife, Shari Heino, keep United Devices' software running on both PCs in their Round Rock, Texas, home. They say the program has not interfered with their PC use. They plan to continue to participate.

"Right now, I'm more interested in the sweepstakes model," McCann says.

Cheryl Currid, an analyst at research firm Currid & Co., says Net- based distributed computing will eventually be widely used on non- sensitive tasks.

For now, it is likely to be used most often by companies mining extra power in their in-house networks.

"Technology-wise, it will definitely work," she says. "Marketing- wise, I think it's a little early. . . . People have to . . . get exposed to it and feel that they are getting something back in return."

TEXT OF INFO BOX BEGINS HERE

<U>Company profiles</U>

DataSynapse

Founded: March 2000

Hq: New York

Employees: 30

Entropia

Founded: March 1997

Hq: San Diego

Employees: 40

Parabon

Founded: June 1999

Hq: Fairfax, Va.

Employees: 50

Popular Power

Founded: January 2000

Hq: San Francisco

Employees: 18

United Devices

Founded: March 2000

Hq: Austin, Texas

Employees: 35

[Illustration]
PHOTO, B/W; Caption: Farming out work: United Devices is one of many small, young companies tapping unused computing power.

^ Back to Top

« Back to Results

< Previous Document 203 of 368 Next >

Publisher Information

Print Email

Mark Document

Abstract , Full Text

Business Wire
The Global Leader in News Distribution

ⓘMangosoft Awarded Two U.S. Patents; Leading Provider of Internet Software and Services Recognized for Distributed Computing Innovations

Business/Technology Editors. **Business Wire**. New York: Dec 12, 2000. pg. 1

Companies:	MangoSoft Corp (NAICS: 511210)
Author(s):	Business/Technology Editors
Publication title:	Business Wire. New York: Dec 12, 2000. pg. 1
Source type:	Wire feed
ProQuest document ID:	65145531
Text Word Count	437
Document URL:	http://proquest.umi.com/pqdweb?did=65145531&sid=2&Fmt=3&clientId=19649&RQT=309&VName=PQD

Abstract (Document Summary)

ⓘMangosoft, Inc. (www.mangosoft.com) is a leading provider of Internet business software and services. ⓘMangosoft's products leverage the company's patented Pooled caching technology. ⓘMangosoft sells its products to companies looking to increase productivity and efficiency while accessing the Internet, intranets and local area networks (LAN). The company's stock is publicly traded (NASDAQ: BB: MNGX). ⓘMangosoft sells its products direct as well as

through a network of value-added resellers and systems integrators.

Full Text (437 words)

WESTBOROUGH, Mass.--(BUSINESS WIRE)--Dec. 12, 2000--ⓘMangosoft, Inc. (Nasdaq BB: MNGX), developers of Internet business software and services, today announced that the U.S. Patent and Trademark Office has issued the company patent number 5,987,506 for Remote Access and Geographically Distributed Computers in a Globally Addressable Storage Environment and patent number 6,148,377 for Shared Memory Computer Networks.

ⓘMangosoft's underlying peer-to-peer (P2P) clustering and secure file system technologies provide the basis for the company's innovative Internet applications: Mangomind(SM), The Business Internet File Service(SM), and Cachelink(R) Pro, Web caching software. The two most recently awarded patents represent the latest successful benchmark in the evolution of core technologies at ⓘMangosoft. With three previously awarded patents for distributed file system and pooled Web caching technologies, ⓘMangosoft continues to pioneer the initiative to bring shared resource technologies, such as P2P clustering, to the forefront of business computing.

"ⓘMangosoft is committed to advancing the state-of-the-art in distributed systems technologies, while continuing to deliver powerful, unique business solutions to the Internet community," said Scott Davis, co-inventor of the technology and vice president and chief technology officer of ⓘMangosoft, Inc. "Our mission is to create an environment for companies where they can communicate with one another through the Internet in a way that is as seamless as if they were sitting across from one another." Davis is the holder of 10 U.S. patents on clustering technologies.

The rights of the patent are effective as of the patent award dates: November 16, 1999 for patent number 5,987,506 and November 14, 2000 for patent number 6,148,377.

About ⓘMangosoft, Inc.

ⓘMangosoft, Inc. (www.mangosoft.com) is a leading provider of Internet business software and services. ⓘMangosoft's products leverage the company's patented Pooled caching technology. ⓘMangosoft sells its products to companies looking to increase productivity and efficiency while accessing the Internet, intranets and local area networks (LAN). The company's stock is publicly traded (NASDAQ: BB: MNGX). ⓘMangosoft sells its products direct as well as through a network of value-added resellers and systems integrators.

For more information, contact ⓘMangosoft at 1-888-88MANGO or visit the company's Web site at www.mangosoft.com.

The matters discussed in this news release include forward- looking statements that may involve a number of risks and uncertainties. Actual results may vary significantly based on a number of factors, including, but not limited to, risks in product and technology development, market acceptance of new products, product demand, the impact of competitive products and pricing, changing economic conditions and other risk factors detailed in ⓘMangosoft's most recent annual report and other filings with the Securities and Exchange Commission.

Mangomind and The Business Internet File Service are servicemarks, and ⓘMangosoft is a trademark of ⓘMangosoft, Inc.

More Like This - Find similar documents

Companies: ☐ MangoSoft Corp

NAICS: ☐ 511210

Author(s): ☐ Business/Technology Editors

Language: ☐ English

Publication title: ☐ Business Wire

Search Clear

---

^ Back to Top « Back to Results < Previous Document 198 of 368 Next > Publisher Information

Print Email ☐ Mark Document Abstract, Full Text

ProQuest COMPANY

Document View

« Back to Results

< Previous Document 237 of 368 Next >

Publisher Information

Print Email

Mark Document

Abstract, Full Text

The New York Times

The Secret Life of the Home Computer

J. D. Biersdorfer. New York Times. (Late Edition (East Coast)). New York, N.Y.: Jun 8, 2000. pg. G.1

» Jump to full text

» Translate document into: Select language

» More Like This - Find similar documents

Subjects:	Personal computers, Distributed processing
Companies:	Search for Extraterrestrial Intelligence (NAICS: 712110), SETI (NAICS: 712110), University of California-Berkeley (NAICS: 611310)
Author(s):	J. D. Biersdorfer
Document types:	Feature
Section:	G
Publication title:	New York Times. (Late Edition (East Coast)). New York, N.Y.: Jun 8, 2000. pg. G.1
Source type:	Newspaper
ISSN/ISBN:	03624331
ProQuest document ID:	54910838
Text Word Count	1891
Document URL:	http://proquest.umi.com/pqdweb?did=54910838&sid=1&Fmt=3&clientId=19649&RQT=309&VName=PQD

Abstract (Document Summary)

Most **distributed computing** systems designed for public participation are on the philanthropic side, but some sites want to bring money into the picture. "Isn't it time your computer started paying for itself?" asks the home page of the ProcessTree Network, an enterprise that would like to pay users money in exchange for their computers' idle time. The ProcessTree Network and DCypher.Net, another **distributed computing** venture, have recently been merged

into a company called Distributed Science.

Although the service hasn't opened yet, its operations are expected to be somewhat like SETI@Home's. After a participant installs the ProcessTree program to a home computer, that user will connect to the Internet to download a work unit, or batch of data, from one of the company's servers. Once the work unit is on the home computer, the ProcessTree software will munch and crunch the information during the PC's idle time. Then it will send data back to the ProcessTree server and collect a new unit.

BEOWULF PROJECT: www.beowulf.org A complete overview and history of the origins of the Beowulf distributed computing movement can be found here, along with links to mailing lists, technical papers, Beowulf clusters around the world and even a how-to section for building a Beowulf of one's own.

Full Text (1891 words)

IDLE hands may be the devil's workshop, but an idle computer has the potential to seek out extraterrestrial life, crack encryption codes and maybe make a little extra cash for its owner.

Distributed computing, in which a large problem or daunting amount of data is parceled out to many -- even millions -- of computers to work on at once, is becoming a viable substitute for the once-almighty supercomputer. Even the humblest home machine can become a cog in a larger computational wheel, receiving data, churning through it at its own speed and returning the results. It's a digital-age illustration of the old adage about how to eat an elephant: one bite at a time.

By far the best-known distributed computing project is SETI@Home, a screen saver program, designed for home computers, that analyzes radio signals from the cosmos for patterns or other signs of alien life. Other projects have found million-digit prime numbers, deciphered secret codes and helped in the design of storage containers for nuclear waste.

Like many successful inventions originally created by scientists to share information and promote the greater good (including the World Wide Web), distributed computing is being examined for its commercial potential: computer owners may be able to, in effect, rent out unused processing time.

SETI@Home (SETI stands for Search for Extraterrestrial Intelligence) was developed at the University of California at Berkeley. It went into full distribution about a year ago and recently signed up its two millionth user. After a participant downloads the free screen saver program, packets of data recorded at a radio telescope in Puerto Rico are sent to the user's computer via the Internet. The participant's computer analyzes a packet when it is not handling other tasks, then sends the data back to the SETI@Home server and receives another packet.

Most of SETI@Home's users have probably never even noticed the computing time that they have donated to the project because the screen saver program makes great use of each computer's idle time. The program can be set to do its analyses when the computer has been idle for a while (for example, when the user takes a break). But it can also be set to function in the much smaller intervals of idle time that occur even when a machine appears to be in constant use.

"Let's say you're typing a story -- each time you hit a key, your computer works for about a hundredth of a second," said Dr. David P. Anderson, a computer scientist who has done extensive research in distributed computing and is also the project director of SETI@Home. "And then it sits there for another second, waiting for you to hit the next key. So even while you think you are using your computer, about 99.99 percent of its time it's not actually doing anything useful." That is, unless it happens to be doing a little distributed work on the side.

Not all supersize projects are suitable for the distributed approach, and large computing chores like weather simulation do not work well because quick calculations are needed. One project in which a cluster proved effective was the RC5-56 Secret Key Challenge, in which thousands of volunteers donated computer time to crack a 56-bit encryption code. The project was one of a number run by Distributed.net, a nonprofit organization that has signed up about 60,000 participants to participate in a variety of code-cracking contests.

All told, SETI@Home's users are currently averaging about 12 teraflops, or 12 trillion calculations per second, over the course of a day, said Dr. Dan Werthimer, an astronomer at Berkeley and the chief scientist for the project. "It's the largest computation that's ever been done -- on this planet, anyway," Dr. Werthimer said.

Dr. Werthimer calculated that home users had donated 283,000 years of computing time to the project so far. "They're donating time, about 1,000 years every day," he said.

Supercomputers are usually used for large computing problems, like nuclear weapons research and weather forecasting, that require a staggering number of calculations, but they are "super" in both processing power and price tag. Computers capable of such power can cost millions of dollars, a price that is beyond the reach of many institutions. And a supercomputer, like any computer, can quickly become obsolete.

SETI researchers ran into the obsolescence problem before turning to distributed computing. They started out building specialized supercomputers to handle the data from the radio telescopes. Because of the rapid advance of technology, though, a SETI-specific supercomputer has a short life span. "After five years, your machine is kind of a dinosaur," Dr. Werthimer explained, "and it's time to build something new."

Distributed computing has been around for several decades, but it has been greatly aided by two developments: the increasing speed of personal computers and the advent of the Internet, which provides an easy and almost instantaneous means of exchanging data between machines.

"The speed of the common PC has increased to such a dramatic rate," Dr. Anderson said, "that the high-end PC today is as fast as one of these Cray supercomputers was about 10 years ago."

The real rise of distributed computing can be traced to 1994, when Dr. Donald Becker and Dr. Thomas Sterling, working for the Center of Excellence in Space Data and Information Sciences at the Goddard Space Flight Center in Maryland, created a cluster computer from 16 processors networked together and dubbed it Beowulf.

Dr. Becker recalled that the name had been chosen by Dr. Sterling for a number of reasons, including a line loosely translated from "Beowulf," the epic Anglo-Saxon poem, that described the heroic Beowulf as having the strength of many.

The Beowulf Project proved that an incredibly powerful computer could be created by harnessing together many smaller computers like Pentium II's running open-source software like Linux. The idea took off, and clusters began to spring up at academic institutions and ⓘNASA research centers.

"We know there are thousands -- there might be as many as 10,000 clusters out there," Dr. Becker said. The Beowulf Project Web site contains a wealth of information about the project, along with the recipe for making a Beowulf cluster and links to mailing lists and other Beowulf-related forums.

Dr. Becker said he expected that Beowulf cluster computers would take over many of the complicated problems that used to be handled only by supercomputers, but not all of them. "There are certainly jobs where only the largest machines are appropriate to use, so there's still a very solid role for traditional supercomputers," he said. "But for most other applications, a cluster like this is much more cost-effective."

Most distributed computing systems designed for public participation are on the philanthropic side, but some sites want to bring money into the picture. "Isn't it time your computer started paying for itself?" asks the home page of the ProcessTree Network, an enterprise that would like to pay users money in exchange for their computers' idle time. The ProcessTree Network and DCypher.Net, another distributed computing venture, have recently been merged into a company called Distributed Science.

Although the service hasn't opened yet, its operations are expected to be somewhat like SETI@Home's. After a participant installs the ProcessTree program to a home computer, that user will connect to the Internet to download a work unit, or batch of data, from one of the company's servers. Once the work unit is on the home computer, the ProcessTree software will munch and crunch the information during the PC's idle time. Then it will send data back to the ProcessTree server and collect a new unit.

In return for those spare processor cycles, the company will mail the user a check or credit the user's online account with small payments that can be spent online like electronic cash.

Armin Lenz, a software developer at Distributed Science, said that more than 25,000 people had signed up to work on the venture. He predicted that distributed computing would become an industry unto itself.

"I think it is going to be huge," Mr. Lenz said in an e-mail message. "Think in terms of going from 'railroads' of supercomputing to the 'individual mass traffic' of distributed processing. There are thousands of projects that cannot be tackled because of a lack of computing power that is at the same time sitting idle on everyone's desk." Although ProcessTree members will not know exactly what their computers are working on, their computers might be used for things like video animation, analyses of scientific and corporate research data, weather models and cryptography.

Dr. Anderson is less sure about whether such payments will be worthwhile for home computer users. "The value of the C.P.U. time is probably small enough that it wouldn't amount to a significant quantity of money for most people," he said.

The ProcessTree venture will be ready to begin as soon as its founders are satisfied with the home-user software, and Mr. Lenz said the company was negotiating with several well-known companies that might need its heavy-duty data analyses. "For DCypher.Net, we have more projects waiting in line than we have people to power them," he said. "There's certainly the need for massive amounts of distributed computing."

Whether for pay or play, distributed computing can be found in computer labs or family dens. And in the case of SETI@Home, which registers the users of its program and tracks the work done by each participating computer, it might just mean that a volunteer somewhere will be the lucky one to have the computer that first detects signals from extraterrestrial beings.

Site-Seeing: Try This at Home
Sites That Can Help You Get More Out of Your Machine

Here are some sites to check if you want to find out about distributed computing, or even do some yourself.

SETI@HOME: setiathome.ssl.berkeley.edu
The screen saver program that lets just about everyone with a computer participate in the Search for Extraterrestrial Intelligence can be downloaded here. The site also has a wealth of information about SETI's work and links to similar sites.

BEOWULF PROJECT: www.beowulf.org

A complete overview and history of the origins of the Beowulf distributed computing movement can be found here, along with links to mailing lists, technical papers, Beowulf clusters around the world and even a how-to section for building a Beowulf of one's own.

PROCESSTREE NETWORK: www.processtree.com
This site of one of the Internet's first companies to offer to pay for idle computer time includes information about the network and a sign-up form.

CLIMATE DYNAMICS AT RAL: www .climate-dynamics.rl.ac.uk Based in England, the Casino-21 project hopes to use a SETI@Home-style screen saver to analyze data and predict the climate of the 21st century.

Volunteers can register to join the project and learn more about long-term weather forecasting.

OPEN DIRECTORY PAGE ON PARALLEL COMPUTING: www.dmoz.org/Computers/Parallel _Computing/Internet_Based The page offers one-stop shopping for links to most of the projects listed above and many other Internet-based distributed computing projects around the world.

DISTRIBUTED.NET: www.distributed.net
Founded in 1997, this nonprofit organization specializes in contests that challenge participants to crack encryption codes with their spare computer time. The site has a number of links to information about other distributed computing efforts.

[Photograph]
ALIEN HUNTER -- Dan Werthimer, an astronomer at the University of California at Berkeley, is chief scientist for SETI@Home, a distributed computing project. (Peter DaSilva for The ⓘNew York Times)(pg. G10)
Drawing (Chris Gould)(pg. G1)

^ Back to Top

« Back to Results

< Previous Document 237 of 368 Next >

Publisher Information

Print Email

Mark Document

Abstract , Full Text

Document View « Back to Results Document 1 Publisher Information

Print Email Mark Document Abstract, Full Text

MOVE IS ON TO PUT IDLE COMPUTERS TO WORK; [FINAL / ALL Edition]

MICHAEL STROH BALTIMORE SUN. **The Plain Dealer**. Cleveland, Ohio: Nov 13, 2000. pg. 3.C

Author(s):	MICHAEL STROH BALTIMORE SUN
Section:	*PERSONAL FINANCE*
Publication title:	The Plain Dealer. Cleveland, Ohio: Nov 13, 2000. pg. 3.C
Source type:	Newspaper
ProQuest document ID:	63701420
Text Word Count	650
Document URL:	http://proquest.umi.com/pqdweb?did=63701420&sid=2&Fmt=3&clientId=19649&RQT=309&VName=PQD

Abstract (Document Summary)

In engineering circles, this concept goes by such labels as "distributed computing," "peer-to-peer computing" and "community computing." Whatever the name, it has become one of the trendiest ideas in the computing industry.

Parabon and the half-dozen or so other start-ups trying to develop the distributed computing concept have attracted tens of millions of dollars in venture capital. The technology also has caught the eye of companies such as ⓘIntel and ⓘHewlett-Packard, which are looking for ways to exploit the thousands of computers that sit dormant on the desks of their secretaries and engineers after the work day is done.

By far the most popular - and powerful - amateur distributed computing project on the Internet is SETI@home. Started in 1998 by scientists at the University of California at Berkeley, the project uses PCs to help analyze cosmic radio signals pulled in by the mammoth Arecibo radio telescope in Puerto Rico (the one featured in the movie "Contact," starring Jodie Foster). The goal of SETI@home: to hunt for signs of extraterrestrial life.

Full Text (650 words)

Your home computer is a lazy bum. Most of the time it just sits there, fanning itself, barely breaking a sweat as it shuffles e- mail, balances your checkbook, defeats you at chess.

But its loafing days might soon be over.

Dusting off a long-buried idea from the annals of computer history, a group of Internet entrepreneurs is aiming to put idle home computers around the world to work. Soon, while you're on the job or in bed, your computer could be helping researchers find a cure for cancer, or could be earning a little extra cash by, say, creating digital special effects for some Hollywood studio.

This, at least, is the vision of people such as Steve Armentrout, who left his job in the financial industry last year to start Parabon Computation in Fairfax, Va.

The logic behind what he and others are trying to do is that there are roughly 100 million Internet-connected home PCs in the United States, most of them using a tiny fraction of their increasingly powerful microchips.

Harness a few thousand of these through the Internet, Armentrout said, and you have the collective number-crunching equivalent of a supercomputer without the multimillion-dollar price.

In engineering circles, this concept goes by such labels as "distributed computing," "peer-to-peer computing" and "community computing." Whatever the name, it has become one of the trendiest ideas in the computing industry.

Parabon and the half-dozen or so other start-ups trying to develop the distributed computing concept have attracted tens of millions of dollars in venture capital. The technology also has caught the eye of companies such as ⓘIntel and ⓘHewlett-Packard, which are looking for ways to exploit the thousands of computers that sit dormant on the desks of their secretaries and engineers after the work day is done.

Computing projects

Dozens of amateur efforts on the Internet offer a glimpse of what distributed computing can do.

More than 15,000 math addicts and their computers, for example, have joined forces in hot pursuit of rare prime numbers and a $100,000 cash prize in the Great Internet Mersenne Prime Search,

http://www.mersenne.org

But by far the most popular - and powerful - amateur distributed computing project on the Internet is SETI@home. Started in 1998 by scientists at the University of California at Berkeley, the project uses PCs to help analyze cosmic radio signals pulled in by the mammoth Arecibo radio telescope in Puerto Rico (the one featured in the movie "Contact," starring Jodie Foster). The goal of SETI@home: to hunt for signs of extraterrestrial life.

As with all distributed computing projects, SETI@home volunteers download a free program that acquires a small portion of project data when computer owners log on and crunches it when the computer isn't occupied with something else.

More than 2 million people have signed on, with 3,000 recruits daily, according to organizers. That makes it effectively the world's fastest computer.

With distributed computing, one big problem is divided up among lots of small computers rather than the old way, where one big computer divided its brainpower among lots of little problems.

Digital philanthropy

Some new distributed-computing companies are trying to drum up interest with digital philanthropy projects. San Francisco-based Popular Power, for example, is recruiting PC owners to help analyze a vaccine for the influenza virus.

Parabon has its "Computing for Cancer" project, in which home computers analyze chemotherapy data. The company is about to begin another health-related project with a University of Maryland researcher. Their goal is to use distributed computing to attack one of molecular biology's hottest problems, protein folding.

The biggest draw for PC owners could be cash. Parabon and others are promising to start paying computer owners whose machines handle commercial work.

Marc Hedlund, chief executive officer of Popular Power, estimates that monthly paychecks would be about $15, maybe enough to subsidize an Internet habit, but "you're not going to quit your day job," he says.

Document View

« Back to Results

Document 1

Publisher Information

Abstract, Full Text

Print Email

Mark Document

ⓘDataSynapse Announces Premium Benefits Package for Broadband Users Who Join The Company's Distributed Computing Network

PR Newswire. New York: Nov 13, 2000. pg. 1

» Jump to full text

» Translate document into: Select language

» More Like This - Find similar documents

Companies: Broadband Users Who Join The Co, DataSynapse
Dateline: *New York*
Publication title: PR Newswire. New York: Nov 13, 2000. pg. 1
Source type: Wire feed
ProQuest document ID: 63665654
Text Word Count 727
Document URL: http://proquest.umi.com/pqdweb?did=63665654&sid=2&Fmt=3&clientId=19649&RQT=309&VName=PQD

Abstract (Document Summary)

ⓘDataSynapse currently has five beta clients in the financial services sector, an industry with an ever present need for speed. ⓘDataSynapse divides large computing jobs from its financial services clients into smaller tasks, each to be performed by an idle network computer. Through the 100% broadband network, ⓘDataSynapse enables supercomputer-level processing speed.

ⓘDataSynapse, Inc. is creating the world's largest, secure peer-to- peer 100% broadband PC network over the Internet. Focusing initially on the financial services sector, ⓘDataSynapse harnesses idle PC capacity to distribute complex applications with significant time and cost savings. ⓘDataSynapse is the only company focusing its network on 100% broadband PC users and enabling a peer-to-peer platform that can be implemented over the Internet, extranet, or intranet. The company pays users to utilize their idle PC power and also provides them with next generation web searching, communications, and collaborative applications that can leverage the collective idle capacity of its broadband network. For more information, please visit www.datasynapse.com.
SOURCE ⓘDataSynapse

Full Text (727 words)

- ⓘDataSynapse Opens First 100% Broadband Distributed Computing Peer-to-Peer

Network Today; Offers Home Users Unmatched Benefits for

Idle Processing Power -

NEW YORK, Nov. 13 /PRNewswire/ -- Starting today, home broadband users who visit the ⓘDataSynapse website (http://www.datasynapse.com) and sign in will be able to profit from the time their computers sit idle by joining the company's premium distributed computing platform. In exchange for downloading a lightweight application smaller than the typical business presentation, members will receive a host of benefits that include a state of the art security firewall, an initial payment of $5 of Flooz(R) and the chance to win a sports car or a PDA, with other benefits to come through continuing participation.

ⓘDataSynapse, a new company with an innovative approach to brokering processing power between home users and corporations is actively recruiting members to its 100% broadband network. Once part of the ⓘDataSynapse network, users can exchange their dormant computing power for benefits including future gifts of Flooz and chances to win additional prizes.

Recognizing that security is a top concern of Internet users who download files, ⓘDataSynapse will offer Zone Labs' top-rated Internet security software, Zone Alarm (TM), a combined personal firewall and application control, into the free ⓘDataSynapse application download available to all users.

The full list of ⓘDataSynapse benefits includes:

-- Zone Labs' award-winning Internet security utility, Zone Alarm (TM), to

protect their PCs from Internet vandals and hackers.

-- Flooz online gift currency earned on a per-hour basis, which can be

used to purchase goods and services at the Web's best stores, or

members can donate their flooz to charity through Charitableway.

-- The opportunity to win a ⓘPorsche 2001 Boxster.

-- A chance to win a Palm V Pilot every week.

-- Access to the network's 'idle PC power' for the next generation of web

searching, communications, and collaborative applications.

"We are bringing more value to our members for less intrusive participation," said Peter Lee, co-founder and chief executive officer of ⓘDataSynapse. "Other companies ask members to download files of 50 to 100 megabytes, configure settings, run applications in the background while users are using their PCs, and actually slow down the computer's performance. We will never ask our users to sacrifice any application performance and we will continue to reward broadband Internet users for participating in our network."

ⓘDataSynapse currently has five beta clients in the financial services sector, an industry with an ever present need for speed. ⓘDataSynapse divides large computing jobs from its financial services clients into smaller tasks, each to be performed by an idle network computer. Through the 100% broadband network, ⓘDataSynapse enables supercomputer-level processing speed.

"We are working with financial institutions on three different levels," said Lee. "We can work with the institution's own pool of computers, an extranet of our computing power partners, or the power derived from our Internet-based 100% broadband user network. We can help customers unleash the supercomputer hiding in the corners of their own offices, or bring supercomputer-like power to their doorstep."

"Peer-to-peer technology for distributed computing opens up whole new methods for financial services organizations to provide real- time information to customers," says Cheryl Currid, President of Currid & Company, a Houston-based high-tech research firm. "Based on years of experience in the financial services sector, the founders of ⓘDataSynapse created a platform that will enable financial institutions to meet customer expectations. Using ⓘDataSynapse's peer- to-peer approach, these financial organizations can migrate from more expensive, and less efficient batch processing, to cost-effective, real-time supercomputing power."

ⓘDataSynapse anticipates building a network of thousands of home broadband users by the end of the end of the first quarter of 2001.

About ⓘDataSynapse

ⓘDataSynapse, Inc. is creating the world's largest, secure peer-to- peer 100% broadband PC network over the Internet. Focusing initially on the financial services sector, ⓘDataSynapse harnesses idle PC capacity to distribute complex applications with significant time and cost savings. ⓘDataSynapse is the only company focusing its network on 100% broadband PC users and enabling a peer-to-peer platform that can be implemented over the Internet, extranet, or intranet. The company pays users to utilize their idle PC power and also provides them with next generation web searching, communications, and collaborative applications that can leverage the collective idle capacity of its broadband network. For more information, please visit www.datasynapse.com.
SOURCE ⓘDataSynapse

[Reference]
Message No: Industry: TELECOMMUNICATIONS; COMPUTER/ELECTRONICS; INTERNET MULTIMEDIA ONLINE;

Publication title: ☐ PR Newswire

Search Clear

^ Back to Top « Back to Results Document 1 Publisher Information

Print Email ☐ Mark Document Abstract , Full Text

PCs put to work, byte by byte Power: A group of Internet entrepreneurs envisions harnessing the unused capacity of millions of home computers to solve important problems.; [FINAL Edition]

Michael Stroh. The Sun. Baltimore, Md.: Oct 19, 2000. pg. 2.A

People:	Armentrout, Steve
Author(s):	Michael Stroh
Column Name:	*SUN JOURNAL*
Section:	*TELEGRAPH*
Publication title:	The Sun. Baltimore, Md.: Oct 19, 2000. pg. 2.A
Source type:	Newspaper
ProQuest document ID:	62767053
Text Word Count	1208
Document URL:	http://proquest.umi.com/pqdweb?did=62767053&sid=1&Fmt=3&clientId=19649&RQT=309&VName=PQD

Abstract (Document Summary)

In engineering circles, this concept goes by such labels as "**distributed computing**," "peer-to-peer computing" and "community computing." Whatever the name, it has become one the trendiest ideas in the computing industry.

Parabon and the half-dozen or so other startups trying to develop the **distributed computing** concept have attracted tens of millions of dollars in venture capital. The technology has also caught the eye of companies such as ⓘIntel and ⓘHewlett-Packard, which are looking for ways to exploit the thousands of computers that sit dormant on the desks of their secretaries and engineers after the workday is done.

By far the most popular - and powerful - amateur **distributed computing** project on **the Internet** is SETI@home. Started in 1998 by scientists at the

University of California at Berkeley, the project uses PCs to help analyze cosmic radio signals pulled in by the mammoth Arecibo radio telescope in Puerto Rico (the one featured in the movie "Contact," with Jodie Foster). The goal of SETI@home: to hunt for signs of extraterrestrial life.

Full Text (1208 words)

Your home computer is a lazy bum. Most of the time it just sits there, fanning itself, barely breaking a sweat as it shuffles e- mail, balances your checkbook, defeats you at chess.

But its loafing days might soon be over.

Dusting off a long-buried idea from the annals of computer history, a group of Internet entrepreneurs is aiming to put idle home computers around the world to work. Soon, while you're on the job or in bed, your computer could be helping researchers find a cure for cancer, or could be earning a little extra cash by, say, creating digital special effects for some Hollywood studio.

This, at least, is the vision of people such as Steve Armentrout, who left his job in the financial industry last year to start Parabon Computation in Fairfax, Va.

"Your computer is yawning at you right now," says Armentrout. "We're going to let it be put to use all the time."

The logic behind what he and others are trying to do is that there are roughly 100 million Internet-connected home PCs in the United States, most of them using a tiny fraction of their increasingly powerful microchips.

Supercomputer equivalent

Harness a few thousand of these through the Internet, says Armentrout, and you have the collective number-crunching equivalent of a supercomputer without the multimillion-dollar price tag.

"We will have the most powerful computer in the world in no time at all," says Armentrout. "And I can deliver it to anyone."

In engineering circles, this concept goes by such labels as "distributed computing," "peer-to-peer computing" and "community computing." Whatever the name, it has become one the trendiest ideas in the computing industry.

Parabon and the half-dozen or so other startups trying to develop the distributed computing concept have attracted tens of millions of dollars in venture capital. The technology has also caught the eye of companies such as ⓘIntel and ⓘHewlett-Packard, which are looking for ways to exploit the thousands of computers that sit dormant on the desks of their secretaries and engineers after the workday is done.

Dozens of amateur efforts on the Internet offer a glimpse of what distributed computing can do.

More than 15,000 math addicts and their computers, for example, have joined forces in hot pursuit of rare prime numbers and a $100,000 cash prize in the Great Internet Mersenne Prime Search (www.mersenne.org).

Organizers say the combined computing power of all these home PCs is roughly equivalent to 22 Cray T932 liquid-cooled supercomputers, among the most powerful computers in the world.

The contest has even inspired crime: In 1998, a computer consultant for telephone giant U.S. West in Denver hijacked 2,500 company computers to enter the hunt for an esoteric category of prime numbers.

Other Internet-based distributed computing projects enlist home PCs to derive digits of the number pi, explore safer ways to store nuclear waste and analyze global climate conditions.

Listening to space

But by far the most popular - and powerful - amateur distributed computing project on the Internet is SETI@home. Started in 1998 by scientists at the University of California at Berkeley, the project uses PCs to help analyze cosmic radio signals pulled in by the mammoth Arecibo radio telescope in Puerto Rico (the one featured in the movie "Contact," with Jodie Foster). The goal of SETI@home: to hunt for signs of extraterrestrial life.

As with all distributed computing projects, SETI@home volunteers download a free software program that acquires a small portion of project data when computer owners log on, and crunch it when the computer isn't occupied with something else.

More than 2 million people have signed on, with 3,000 new recruits daily, according to organizers. That makes it effectively the world's fastest computer.

Distributed computing harks back nearly 50 years, to the early days of computers.

Back then, computers could barely fit into a single room, let alone atop a desk. And the machines were anything but personal: Few organizations could afford more than one machine. As a result, mainframes were typically shared by dozens, even hundreds, of people, a concept known as "time sharing."

Distributed computing adds a new twist to this old formula. Instead of one big computer dividing its brainpower among lots of little problems, one big problem is divided up among lots of small computers.

Armentrout says that potential applications for the technology are endless: Small biotech companies could rent a few thousand home PCs as part of a research effort to develop new drugs. A low-budget film company might use recruits to create digital effects like those in "Star Wars."

And it could be a boon to academic scientists, who typically operate on shoestring budgets and have to jockey for precious supercomputer time, often competing against hundreds of other researchers.

Some new distributed computing companies are trying to drum up interest with digital philanthropy projects. San Francisco-based Popular Power, for example, is recruiting PC owners to help analyze a vaccine for the influenza virus.

Parabon has its "Computing for Cancer" project, in which home computers analyze chemotherapy data. The company is about to begin another health-related project with a University of Maryland researcher. Their goal is to use distributed computing to attack one of molecular biology's hottest problems, protein folding.

"These are incredibly computer intensive problems, the same or more intensive than weather forecasting," says Devarajan "Dave" Thirumalai, a chemist at the University of Maryland, College Park who is in charge of the protein project.

The biggest draw for PC owners could be cash. This fall, Parabon and others are promising to start paying computer owners whose machines handle commercial work.

Marc Hedlund, chief executive officer of Popular Power, estimates that monthly paychecks would be about $15, maybe enough to subsidize an Internet habit, but "you're not going to quit your day job," he says.

Despite its use in hunting aliens and exotic numbers, not everyone is convinced that distributed computer has a future.

Practical, ethical questions

First, not every computing problem can be split up into small pieces and worked on separately. To tackle the ones that can, new distributed computing companies will have to recruit vast armies of PC owners to make their business work, says IDC analyst Christopher Willard.

And that might mean first convincing volunteers that the distributing computer software on their machines isn't rooting around inside their personal files or doing something else it shouldn't.

Even companies that have distributed computing projects might need some persuading before they send their proprietary data to thousands of strangers around the world.

"People aren't just going to put their $30 billion system on the Net and say, `Here, have fun,'" Andrew Grimshaw, president of Applied MetaComputing, said at a recent distributed computing conference.

Finally, there are thorny ethical issues.

For confidentiality reasons, Parabon and other distributed computing companies have decided not to tell recruits what their computers are working on.

That might give some volunteers pause, especially if they suspect their computers are contributing to a controversial line of research.

[Illustration]
Photo(s); Caption: Connections: Dr. Devarajan Thirumalai, professor of chemistry and biochemistry at the University of Maryland, College Park is in charge of a project to use distributed computing to attack one of molecular biology's hottest problems, protein folding.; Credit: LLOYD FOX : SUN STAFF

Credit: SUN STAFF

Author(s): Armentrout, Steve
Michael Stroh

Language: English

Publication title: The Sun

Search Clear

---

^ Back to Top

« Back to Results

< Previous Document 222 of 368 Next >

Publisher Information

Print Email

Mark Document

Abstract , Full Text

Are You Ready for Cooperative Processing?
Networking Management; Apr 1990; 8, 4; ABI/INFORM Global
pg. 54

COMMENTARY

By John Gantz

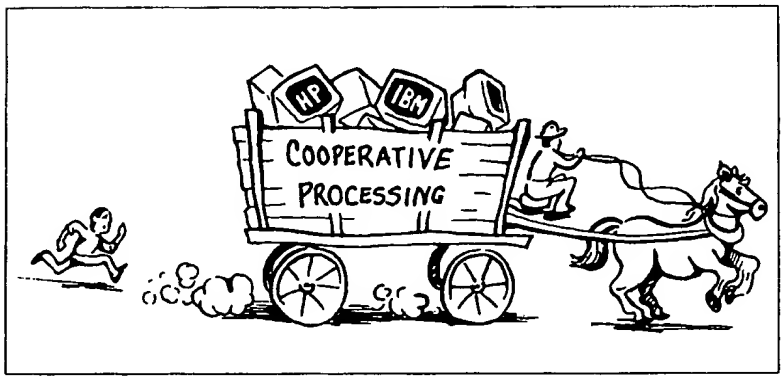
Are you ready for cooperative processing?

Fifteen years ago it was easier to describe the animal—distributed processing. Nobody was quite sure exactly what it was or how it differed from decentralized processing, but everyone was pretty sure that it involved intelligent—meaning programmable and with local memory, storage, and processing—terminals that were hooked to host processors.

Leading vendors of distributed processing included such companies as Datapoint, Four-Phase, Sycor, Data 100, and Raytheon. Even IBM had an entry—the IBM 8100, a rather klugey beast that superseded an even more klugey one, the IBM 3790.

Ah, but that programmability tended to be COBOL, which wasn't very useful to the end-users expected to be working at the terminals. Also prices per terminal tended to be high. As far as those on the distributed end of distributed processing went, there wasn't much to differentiate distributed processing from nondistributed processing, since both were administered by central MISs.

So the PC came along, caught the end-users' fancy, and monopolized the sleeplessness of MIS managers and computer vendors for a decade. Distributed processing went underground. The leading vendors disappeared, the buzz phrase gathered cobwebs, and the concept languished.



Cooperative processing is making a comeback, and this time vendor after vendor is jumping on the bandwagon.

Now distributed processing is back. It's going by other names, of course, since no one likes to use worn-out buzz words. Also, the impetus for it is coming from the terminal end rather than the host end, but it's back nevertheless.

While the best generic phrase for 1990-style distributed processing might be "enterprise-wide client/server computing," most vendors have their own names for it. To wit: cooperative processing (IBM); cooperative computing (Hewlett-Packard); team computing (Hewlett-Packard's workstation group); open network computing (Sun); open/architecture (Wang); client/server computing (Digital); distributed computing (Data General); and open, cooperative computing (NCR).

Not since IBM announced its SNA and vendor after vendor subsequently introduced their own network architectures have so many architectures been announced. This is a major bandwagon.

There are, of course, a number of elements that separate the cooperative processing of the 1990s from the distributed processing of the 1970s. For one, the former has resulted from the need to accommodate already-installed desktop processing capability in enterprise-wide information networks. The latter was merely an attempt to use the new technology of the microprocessor to offload central processing and data entry chores. For another, today's cooperative processing is generally built around architectures the vendors claim are "open," which means that they will either accommodate devices or software from other vendors, or the specs are made available to others. Distributed processing of the 1970s tended to be proprietary. Finally, today's cooperative processing pays more homage to standards, both *de facto* and *de jure*. It's the only way to accommodate heterogeneous computing and communications environments.

So what does a 1990's entry in the cooperative processing derby generally look like? Here are some of the elements:

- An overall architecture. This is needed to provide the bridge between the old, proprietary batch mainframe or time-sharing minicomputer computing and this new kind of shared applications processing.

■ Sophisticated user interfaces, or windowing at a minimum. These are needed to provide desktop access to multiple applications and platforms.

■ Integration building blocks. These are services (mostly software) that are available from vendors to allow software developers to build cooperative processing applications. These include such things as Hewlett-Packard's NewWave object management facility, Digital's Network Applications Support, and IBM's LU 6.2 peer-to-peer networking protocol.

■ Administrative tools. These provide distributed system management, storage management, and network management.

■ Application development tools. These are the discounted hardware and software tools that help independent and end-user software developers build applications. They include editors, debuggers, CASE, and so forth.

■ Hardware and software platforms—the basic processing engines.

■ Network gateways and connectivity tools. These are the software and hardware widgets that allow heterogeneous networks to work.

■ Lead applications. Without some applications to use cooperative processing, users won't really know what the technology is. IBM has OfficeVision, Digital has its All-in-1 Phase II, Data General its Object Office, and so on. Other applications are being built around distributed Structured Query Language data bases.

Understand that, for the most part, cooperative processing is still 85% vaporware. For all of the vendors' schemes to work seamlessly, a lot more building blocks need to be put in place. Digital, for instance, has some client/server support for its VAX VMS line of computers that it doesn't have for its Ultrix systems; Hewlett-Packard has just started shipping its NewWave software, which is used by a number of other vendors; and IBM has announced but is not shipping its Repository product, the software that keeps track of what's going on in the cooperative processing environment.

But let's assume that over the next five years this stuff comes to pass. Let's assume that it becomes possible to build computing networks where applications are split across networks, where users at desktop machines have transparent access to network resources, and where enough applications are developed to standard interface specifications that they can work on hardware from more than one vendor. What does this mean for network managers?

Well, a lot. And much of it is going to be a challenge.

■ Bandwidth needs will go up. There are at least three reasons for this: (1) Much of the cooperative processing of the 1990s will be predicated on "object management," which is conducive to manipulating images and graphics along with text and data. Imaging is extremely bandwidth intensive, so much so that many users with imaging systems build separate imaging networks today to prevent throughput bottlenecks on data networks. (2) Misapplication of client/server computing can put a tremendous load on the network as clients and servers talk needlessly. And (3) a higher percentage of the bandwidth will be required for administrative traffic.

▼

The impetus for cooperative processing is coming from the terminal end rather than the host end.

■ Bandwidth requirements will get tougher to predict. If all of this works as seamlessly as promised, client requests and server responses will be flying around the networks at an amazing rate without network administrators knowing in advance which clients and which servers will be talking to one another or for how long. You'll be able to overbuild, of course, but it will be impossible to predict how the traffic from multiple applications will interact.

■ Security will become a problem. With all these clients talking to all these servers, and LANs talking to MANS talking to WANs, the opportunity for security problems increases. If a virus can do what it did to the Internet network two years ago, it can also do it to a corporate collection of interconnected LANs.

■ Network design will become tougher. This is in part because the demand cannot be forecast and in part because of the inability of network design and testing tools to work across multiple vendor equipment.

And so it goes. The by-product from a career standpoint is that the job of managing networks becomes much more complex. In essence, network managers will be called on to manage more levels of the OSI seven-layer model. To understand about the physical and transport needs of an enterprise-wide network, managers will have to know what will happen when their organizations start linking distributed relational data bases and using repositories or common data dictionaries as traffic cops. They'll have to understand the implications of image processing and teleconferencing applications on their networks, and they'll have to understand what happens when they overlay *ad hoc* networking applications, such as client/server-based office automation, on dedicated applications (such as transaction processing) networks.

In the end, cooperative processing of the 1990s will be much the same as distributed processing of the 1970s. Proponents will describe it as thus and such, users will adopt it at their own pace and in their own renditions, and 10 years from now the environment will be radically different both from what it is now and from what cooperative processing proponents predict it will be 10 years hence.

In the meantime, network managers will be the ones that wrestle the concept to the ground and turn it into the reality it will become. ■

John Gantz *is a contributing editor of* Networking Management *magazine and executive vice president of TFS Inc., a research and consulting firm located in Westford, Mass.*

U. S. DEPA
COMMISS
P.O. BOX 1450
ALEXANDRIA, VA 22313-1450
IF UNDELIVERABLE RETURN IN TEN DAYS

OFFICIAL BUSINESS

UNITED STATES POSTA
02 1
000426447
MAILED FROM

AN EQUAL OPPORTUNITY EMPLOYER

UNABLE TO FORWARD

RECEIVED
APR 11
USPTO MAIL CE

RECEIVED
APR 11 2006
USPTO MAIL CENTER

BEST AVAILABLE COPY